

WE CLAIM:

1. A surgical drain comprising:
 - an elongated conduit configured to be implanted in and to drain fluid from a body cavity, the elongated circuit including a first surface and a second surface;
 - a first optical fiber having a first optical fiber distal end configured for insertion in tissue proximate to the first surface and configured to deliver energy to the tissue; and
 - a second optical fiber having a second optical fiber distal end configured to receive energy from tissue proximate to the first surface.
2. The surgical drain of claim 1, wherein the first optical fiber distal end has an axis that is substantially parallel to the second fiberoptic distal end.
3. The surgical drain of claim 1, wherein the second optical fiber distal end is configured for insertion in the tissue.
4. The surgical drain of claim 1, wherein the elongated conduit further comprises at least one housing extending from the conduit, wherein the housing supports the first optical fiber distal end for insertion into the tissue.
5. The surgical drain of claim 1, comprising a sensing system configured to sense a different physiological property of the tissue.
6. The system of claim 1, wherein the physiological property is selected from the group comprising: oxygenation, perfusion, temperature, pH, NADH levels, biochemical composition, drug concentration, turgidity or pressure.
7. The surgical drain of claim 1, wherein the conduit includes a drain portion configured to rest against a substantial length of tissue within the body cavity and a plurality of drain holes spaced along substantially the entire length of the drain portion.
8. The surgical drain of claim 1, wherein at least the second optical fiber distal tip is embedded within the conduit behind material that is optically transparent.

9. The surgical drain of claim 1, further comprising a display configured to depict information corresponding to the energy received by the second optical fiber distal end.

10. The surgical drain of claim 1, further comprising:

a third optical fiber having a third optical fiber distal end configured for insertion in tissue proximate to the second surface and configured to deliver energy to the tissue; and

a fourth optical fiber having a fourth optical fiber distal end configured to receive energy emitted from the third optical fiber distal end.

11. The system of claim 1, further including a processing system in communication with the second and fourth optical fibers configured to compare a difference between the energy received by the second and fourth fibers.

12. The surgical drain of claim 1, wherein the first sensing system includes a component that is affixed to the conduit.

13. The surgical drain of claim 1, wherein the component is embedded in the conduit.

14. The surgical drain of claim 1, wherein the component includes a sensor.

15. The surgical drain of claim 1, wherein the component includes an optical fiber.